

The diagram illustrates the process of epitaxial growth and patterning in five sequential steps, each shown as a cross-sectional view of a wafer with an upward arrow indicating the progression:

- Step 1:** A single layer of **epitaxial layer** is grown on a **wafer**.
- Step 2:** A layer of **photo-resist** is applied over the epitaxial layer. The photoresist is then **exposed and developed** to form a pattern.
- Step 3:** The **etching** process is performed, removing the photoresist and the underlying epitaxial layer to create a **mesa** structure.
- Step 4:** The remaining photoresist is **removed**, leaving the patterned epitaxial layer on the wafer.
- Step 5:** **Metalization** is performed, depositing a metal layer that connects the mesa structures, forming a **metal connection**.

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graph LR
    A[epi taxy] --> B[spinning photo-resist]
    B --> C[exposing and developing]
    C --> D[etching]
    D --> E[removing photo-resist]
    E --> F[metalization]

```

1. 2. 3. 4. 5. 6. 7. 8. 9. 10. 11. 12. 13. 14. 15. 16. 17. 18. 19. 20. 21. 22. 23. 24. 25. 26. 27. 28. 29. 30. 31. 32. 33. 34. 35. 36. 37. 38. 39. 40. 41. 42. 43. 44. 45. 46. 47. 48. 49. 50. 51. 52. 53. 54. 55. 56. 57. 58. 59. 60. 61. 62. 63. 64. 65. 66. 67. 68. 69. 70. 71. 72. 73. 74. 75. 76. 77. 78. 79. 80. 81. 82. 83. 84. 85. 86. 87. 88. 89. 90. 91. 92. 93. 94. 95. 96. 97. 98. 99. 100.

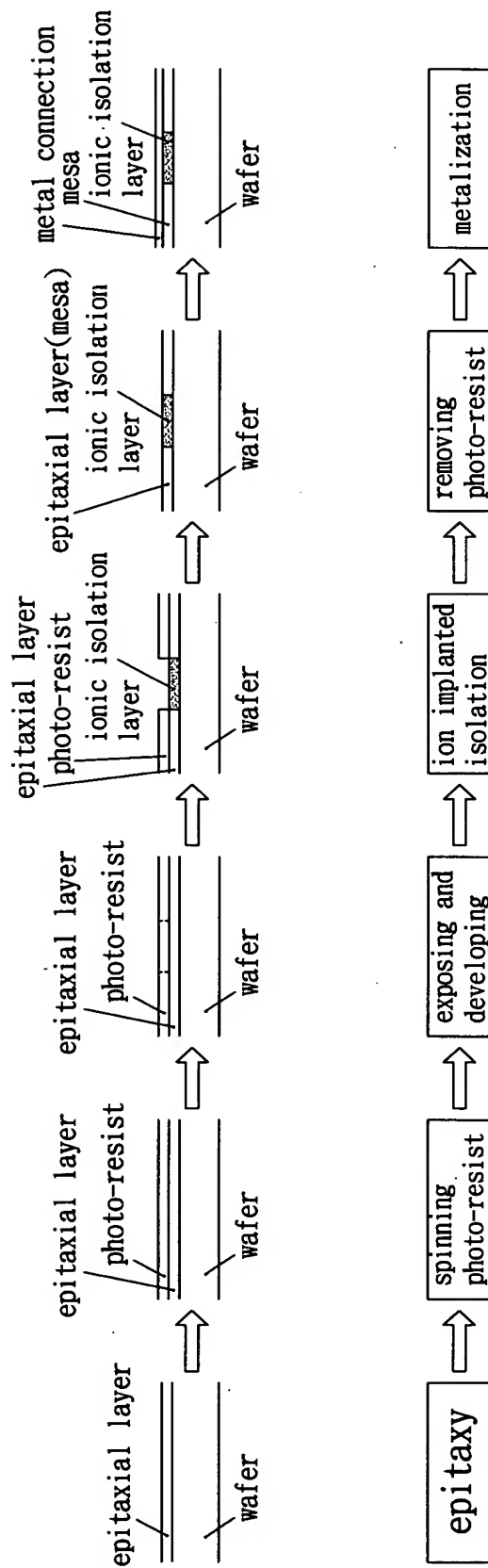


FIG. 2

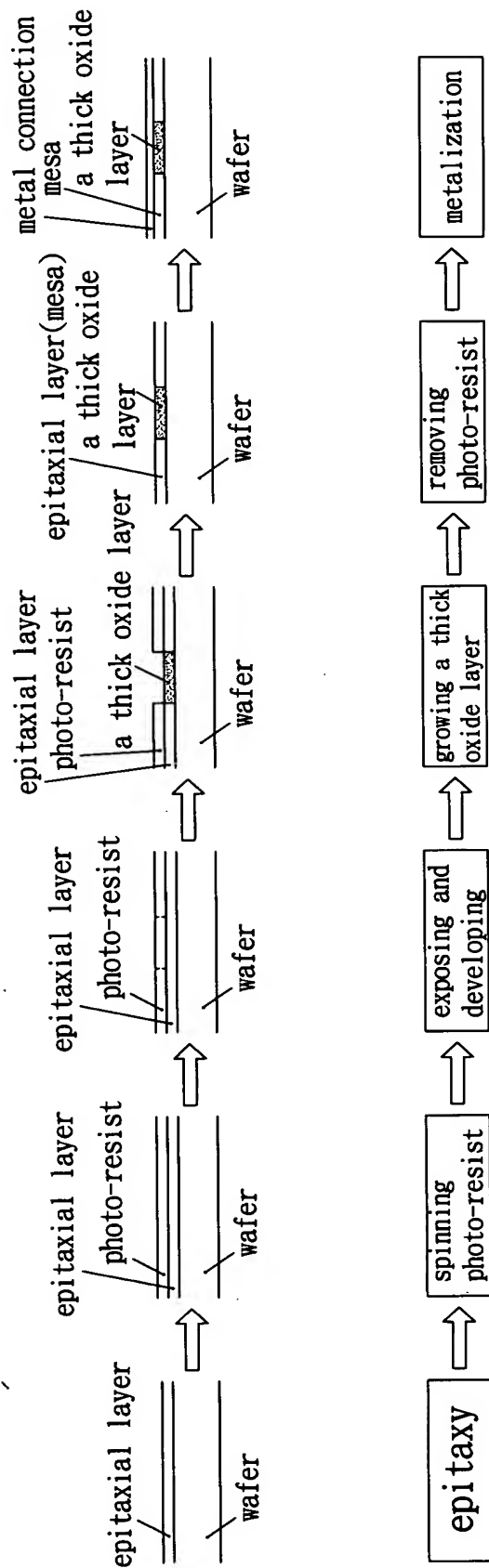


FIG. 3

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graph LR
    A[epitaxy] --> B[spinning photo-resist]
    B --> C[exposing and developing]
    C --> D[etching]
    D --> E[growing a thin oxide layer]
    E --> F[removing photo-resist]
    F --> G[metallization]
```

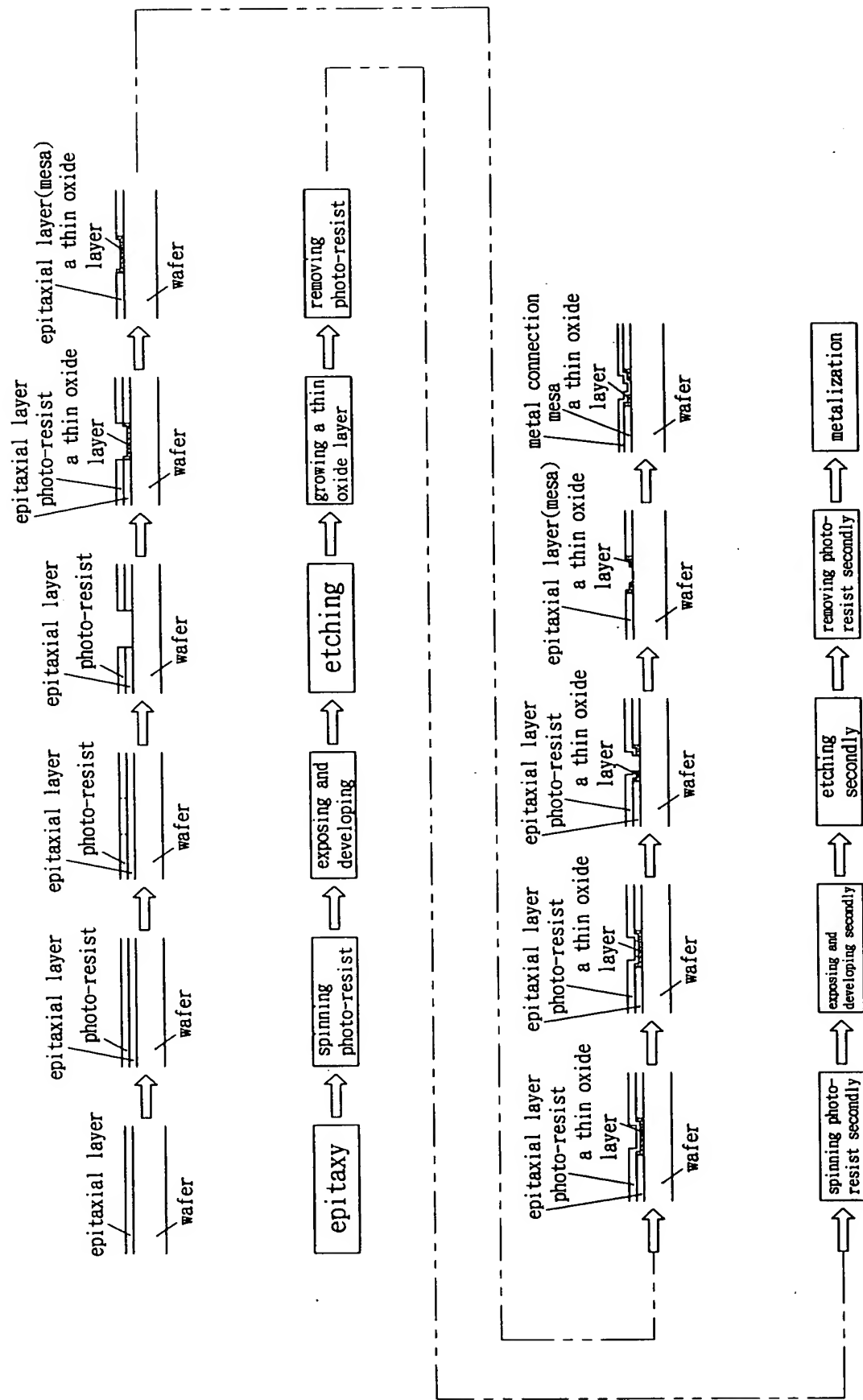


FIG. 5